

Micrometrical Measures of Double Stars in 1918.

By Rev. T. E. R. Phillips, M.A.

The stars in the following lists were measured in 1918 with the 8-inch refractor belonging to the Society:—

Star.	1920.		Mags.	Position-Angle.	Dis-tance.	No. of Nights.	Date.
	R.A.	Dec.					
	h m	° ' "		°	"		
Σ 60 (η Cassiop.)	0 44·0	+ 57 24	4·0, 7·6	256·0	6·92	4	1918·637
73 (36 Androm.)	0 50·7	23 12	6·2, 6·8	49·0	0·90	4	·787
138	1 31·8	7 16	7·3, 7·3	43·3	1·79	3	·926
178	1 47·8	10 25	7·8, 7·8	199·3	3·24	3	·937
180 (γ Arietis)	1 49·1	18 54	4·2, 4·4	359·4	8·13	3	·862
186	1 51·7	1 27	7·2, 7·2	43·3	1·10	3	·942
OΣ 38 (γ ₂ Androm.)	1 59·0	41 57	5·0, 6·2	112·6	0·52	4	·836
Σ 425	3 35·1	33 52	7·3, 7·3	86·9	2·44	2	·913
535	4 18·8	11 12	6·7, 8·2	324·1	1·24	2	·922
OΣ 95	5 0·8	19 42	6·5, 7·0	320·0	0·73	2	·977
A. G. Clark I. (Sirius)	6 41·6	- 16·35	1·4, 10·0	72·1	10·87	6	·162
				68·9	10·88	2	·799
Σ 982 (38 Geminorum)	6 50·1	+ 13 17	5·4, 7·7	156·5	6·50	2	·987
1110 (Castor)	7 29·5	32 4	2·7, 3·7	215·9	4·78	4	·916
1126	7 35·8	5 24	7·2, 7·5	148·3	1·26	3	·242
1130	7 37·3	9 54	8·4, 8·9	171·5	1·00	3	·243
1196 (ζ Cancri) AB	8 7·6	17 54	5·5, 6·2	291·3	0·96	3	·188
BC	110·7	4·87	2	·186
1356 (ω Leonis)	9 24·2	9 25	6·2, 7·0	128·8	0·98	3	·291
1424 (γ Leonis)	10 15·5	20 15	2·0, 3·5	116·1	3·63	4	·211
1536 (ι Leonis)	11 19·7	11 1	3·9, 7·1	39·9	1·86	3	·344
1670 (γ Virginis)	12 37·7	- 1 0	3·6, 3·6	323·2	5·78	3	·345
1865 (ζ Böötis)	14 37·3	+ 14 4	3·5, 3·9	138·5	0·81	6	·302
1877 (ε Böötis)	14 41·5	27 21	3·0, 6·3	333·1	2·58	3	·361
1888 (ξ Böötis)	14 47·7	19 26	4·7, 6·6	78·0	2·24	5	·154
				77·0	2·23	5	·363
				76·2	2·32	5	·424
				76·9	2·30	5	·528
Mean of all measures:—				77·0	2·75	20	·370
1932 (ι Coronæ)	15 14·9	27 7	5·6, 6·1	111·1	0·65	3	·357
1937 (η Coronæ)	15 19·9	30 34	5·5, 6·0	73·8	0·75	3	·358

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Star.	1920.		Mags.	Position- Angle.	Dis- tance.	No. of Nights.	Date.	
	R. A.	Dec.						
	h m	° '						
Σ 2032 (σ Coronæ)	16 11.7	34 1	5.0, 6.1	217.9	4.76	3	1918.405	
2055 (λ Ophiuchi)	16 26.9	2 10	4.0, 6.1	76.5	0.90	3	.384	
2140 (α Herculis)	17 11.0	14 29	3.0, 6.1	110.7	4.57	3	.419	
2244	17 53.0	0 4	6.9, 7.1	276.2	0.78	3	.394	
2245	17 52.9	18 20	7.0, 7.0	292.5	2.54	3	.415	
2264 (95 Herculis)	18 58.4	21 36	4.9, 4.9	258.6	6.02	3	.457	
2272 (70 Ophiuchi)	18 1.4	2 31	4.1, 6.1	135.9	5.09	5	.363	
				135.8	5.12	5	.422	
				134.9	4.99	5	.554	
				134.2	5.01	5	.666	
	Mean of all measures:—				135.2	5.05	20	.501
2375	18 41.5	5 24	6.2, 6.6	113.9	2.26	3	.477	
2382 (ε ₁ Lyrae)	18 41.7	39 35	4.6, 6.3	8.5	2.90	3	.392	
2383 (ε ₂ Lyrae)			4.9, 5.2	119.8	2.33	3	.392	
2384	18 38.5	67 4	8.0, 8.5	307.4	0.76	2	.398	
2579 (δ Cygni)	19 42.5	44.55	3.0, 7.9	280.5	1.69	3	.406	
2583 (π Aquilæ)	19 44.9	10 25	6.0, 6.8	113.6	1.54	3	.536	
OΣ 413 (λ Cygni)	20 44.3	36 12	5.0, 6.3	49.7	0.69	3	.415	
Σ 2822 (μ Cygni)	21 40.5	28 23	4.0, 5.0	134.6	1.47	2	.590	
3041 BC	23 43.8	16 38	7.3, 8.1	179.6	3.60	3	.766	
3050	23 55.4	33 17	6.0, 6.0	224.9	2.24	3	.893	

Notes.

- A. G. Clark I. (Sirius). The comes is at present quite an easy object with 8 inches in good atmospheric conditions.
- Σ 1110 (Castor). The measures of the last few years have exhibited a very decided diminution in the distance, while the angle is diminishing very slowly.
- Σ 1888 and Σ 2272. Much attention has again been given to ξ Böötis and 70 Ophiuchi, but there is nothing calling for remark in the measures.

Headley Rectory, Epsom.
1919 May 5.

Note on Espin's List of New Double Stars. By Eric Doolittle.

This interesting list of the most recent discoveries, which appears in the *Monthly Notices*, 79, 212-217, comprises 71 pairs found by Espin and 79 pairs discovered by Milburn—150 pairs altogether. The following errata and identities may be noted:—

Espin 1741. The Decl. is $4'$ too large.

1758. This triple was first measured by Fox (*Annals, Dearborn Obs.*, i.).

1911·73 $179^{\circ}6$ $5''\cdot42$ $10\cdot0$ $11\cdot7$ AB 3n.

1911·75 $347^{\circ}5$ $29\cdot03$ $10\cdot5$ AC 2n.

Milburn 47. The number of nights is omitted in AC.

55. This is Roe 76. The position from measures from DM 40° (783), 8·8 magnitude, is (1880·0), R.A. = 3 hrs. 26 min. 0·8 secs.; Decl. = $40^{\circ}23\cdot5$. The only prior measure is by Roe:—

1914·11 $30^{\circ}4$ $4''\cdot18$ $9\cdot5$ $9\cdot8$ 3n (A.N., 4762).

64. This was discovered by Pettit in 1916 (= Pettit 11). His measure is:—

1916·85 $6^{\circ}6$ $4''\cdot24$ $9\cdot1$ $10\cdot4$ 3n (A.J., 715).

68. Identical with Jonckheere 1023, but the identification of this was erroneous in *J.A.*, ii. p. 16. That given by Milburn is correct. The pair is also A.G. Lund, 5451, 9·5 magnitude. The earliest measure is:—

1911·75 $171^{\circ}6$ $4''\cdot20$ $9\cdot3$ $9\cdot5$ Jonckheere 2n.

96. Identical with Doolittle 18 (*General Catalogue*, 11780), but the identification in the *G.C.* is in error. That given here is correct. The only prior measure is:—

1899·11 $44^{\circ}8$ $2''\cdot70$ $9\cdot2$ $10\cdot5$ Doolittle 4n - 3n.

103. The angles by Milburn and Espin differ by $16^{\circ}2$. Misprint in one of the measures (?).

The Flower Observatory:
1919 March 28.